

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/817,559	03/26/01	PEACHER	C 3174-000093

827572 MMC2/1102  
HARNESS, DICKEY & PIERCE, PLC  
P.O. BOX 828  
BLOOMFIELD HILLS MI 48303

EXAMINER

GONZALEZ, J

ART UNIT

PAPER NUMBER

2834

**DATE MAILED:**

11/02/01

Please find below and/or attached an Office communication concerning this application or proceeding.

**Commissioner of Patents and Trademarks**

<b>Office Action Summary</b>		Application No. 09/817,559	Applicant(s) PEACHEE ET AL.
Examiner Julio C. Gonzalez		Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on \_\_\_\_.  
 2a) This action is **FINAL**.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-27 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 1-27 is/are rejected.  
 7) Claim(s) \_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 26 March 2001 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.  
 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.  
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) The translation of the foreign language provisional application has been received.  
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ .

4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_ .  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other.

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the insulation layer

~~between the winding wire and the stator segment core disclosed in claim 7, and the central portions that are deformed disclosed in claim 10 and the stack of stator plates as disclosed in claim 10 must be shown or the feature(s) canceled from the claim(s).~~

No new matter should be entered.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 10, the core includes lateral slits and also first and second central portions that are deformed. How are these central portions deformed? Where are the central portions located?

Applicant discloses in claim 1 a sensor less invention, yet in claim 2, an inductance sensor is disclosed. Is the inductance sensor not considered a sensor? What does it mean by a sensor less invention then?

***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-27 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of copending Application No. 09/803876. Although the conflicting claims are not identical, they are not patentably distinct from each other because: Both inventions are related to a switch reluctance machine comprising a stator, rotor, a drive circuit, stack of stator plates, insulation layer between the winding wire and the stator segments, end caps and end caps retainers and both inventions use sensor less techniques for determining the position of the rotor.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. Claims 1, 4, 5, 8, 11, 14, 15, 21, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Koide et al.

Koide et al discloses a stator 30 including a plurality of spaced stator segment with a stator core and winding wire around the stator; a rotor with a plurality of rotor poles 71, a drive circuit that energizes the winding wire of the stator based on a rotational position of the rotor using sensor less techniques (column 4, lines 41-56).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 9, 16-20, 22, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koide et al in view of Trago et al.

Koide et al discloses a stator 30 including a plurality of spaced stator segment with a stator core and winding wire around the stator; a rotor with a plurality of rotor

poles 71, a drive circuit that energizes the winding wire of the stator based on a rotational position of the rotor using sensor less techniques (column 4, lines 41-56). However, Koide et al does not disclose a stack of stator plates.

On the other hand, Trago et al discloses for the purpose to increase the capacity of the motor to dissipate heat, a stack of stator plates having lateral slits and central portions 69 that are deformed using a punch to hold the stack of stator plates together (see figure 7). Also, there is an insulation layer between the winding wire and the stator segment (see figure 13) and end caps with end cap retainer for holding the winding wire (see figure 8, 10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a motor using sensor less techniques for detecting the position of the rotor as disclosed by Koide et al and to modify the invention by using stack of stator plates for the purpose to increase the capacity of the motor to dissipate heat as disclosed by Trago et al.

10. Claims 2, 3, 6, 7, 10, 12, 13, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koide et al. in view of *Wolfman*.

Koide et al discloses a stator 30 including a plurality of spaced stator segment with a stator core and winding wire around the stator; a rotor with a plurality of rotor poles 71, a drive circuit that energizes the winding wire of the stator based on a rotational position of the rotor using sensor less techniques (column 4, lines 41-56).

However, Koide et al does not disclose a pulse generator.

On the other hand, Hoffmann et al disclose for the purpose of controlling the rotational speed and phase of a synchronous motor, a pulse generator 26 and an inductance sensor 4 (see figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a motor using sensor less techniques for detecting the position of the rotor as disclosed by Koide et al and to modify the invention by using a pulse generator for the purpose of controlling the rotational speed and phase of a synchronous motor as disclosed by Hoffmann et al.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is (703) 305-1563. The examiner can normally be reached on M-F (8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Jcg

October 23, 2001

*Karl Tamai*  
KARL TAMAI  
PRIMARY EXAMINER